

REMARKS

The January 11, 2006 non-final Office Action regarding the above-identified application has been carefully considered; and the claim amendments above together with the remarks that follow are presented in a bona fide effort to respond thereto and address all issues raised in that Action. For reasons discussed below, it is believed that this case is in condition for allowance. Prompt favorable reconsideration of this amended application is requested.

The pending set of claims has been extensively revised, in some cases to provide coverage Applicants consider to be more desirable, and in other cases, to distinguish certain claims over applied art. Care has been taken to avoid introduction of new matter, as outlined below.

In several of the claims, recitations regarding 'plates' has been broadened somewhat to refer more generally to "structures for simulating vehicle wheels." Support for this revised claim language may be found in paragraph 0012 of the original specification which states that the "plates simulate the vehicle wheel."

Claim 21 and a number of the new claims (e.g. 33 and 38) refer to the assembled jig as having a "quadrilateral shape." The word "quadrilateral" is used in a commonly understood manner to refer to a four sided figure. The specification refers to a parallelogram shape and describes a specific jig in the shape of a rectangle (see e.g. paragraph which 0012). However, it is believed that the use of terms such as "parallelogram" and "rectangle" in the specification is exemplary in nature. Those skilled in the art would understand that broader terminology, such as the phrase "quadrilateral shape," encompasses the disclosed rectangle or parallelogram. In view of the exemplary nature of the detailed description, it is believed that one of skill in the art would also understand that other four sided shapes that could be formed of axles and side spacers fall within the scope of broader applicable terminology, such as the new "quadrilateral shape" claim

language. It is therefore submitted that the broad “quadrilateral shape” terminology finds adequate support in the written description of this application.

Claim 21 has been amended to provide a more desired scope of patentable protection. The claim has been amended to refer to certifying a “computer-based” vehicle wheel alignment system. Throughout, the detailed description portion of the specification describes a computer or host element of an exemplary wheel alignment system that the jig is used to certify or calibrate. Paragraph 0060 states that equipment will provide performance verification for a computer-based image processing type wheel alignment system, the example of which is a “visual” or “3D” type image processing aligner. Two steps have been removed from the independent claim.

Also, claim 21 has been amended to recite that the assembling of the certification jig is on the site of the computer-based vehicle wheel alignment system. The original specification referred repeatedly to on-site assembly (see e.g. paragraphs 0039, 0052 and 0081). Fig. 16 illustrates operation of an exemplary visual wheel alignment system, which may be tested and certified using the jig or fixture of Fig. 1.

The new last paragraph of claim 21 recites a step of disassembling the certification jig after the certification of the computer-based vehicle wheel alignment system. The specification refers repeatedly to such disassembly. For example, paragraph 0034 states that it “is possible to assemble connectable spacers and axles, so as to form the jig with the precise known shape, prior to positioning the measuring heads. Then, after determining the accuracy of the wheel aligner, the jig is disassembled for transport or storage.”

Method claim 33 is generally similar to amended claim 21 and is similarly supported by the original written description. Claim 33, however, differs in that 33 specifies calibration instead of certification as recited in claim 21. The calibration aspects of new method claim 33 find support in specification paragraph 0076.

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The 'quadrilateral' aspect of claim 38 has been discussed above. Support for other aspects of new apparatus claim 38 should be readily apparent throughout the drawings and original application text.

For the reasons outlined above, it is believed that the amended versions of the pending claims find completely adequate support in the original written description of this application and that the amendments to the claims do not introduce any new subject matter into this application.

In the latest Action, the Examiner allowed claims 2 and 13-24 (Office Action Summary form, item no. 5); and the Examiner indicated that former versions of claims 3, 4, 6, 7 and 9-12 would be allowable if recast in independent form. However, it is felt that a number of the allowable claims actually would have been too narrow in scope. A number of these claims have been cancelled and others have been amended to broaden and/or otherwise modify the scope thereof.

Of the allowable claims, claims 13-20 remain active in a scope fairly similar to that allowed in the Action. Claim 13 has been modified somewhat to replace the reference to "plates" with references to "structures." It is believed that the broadening on this point should not affect patentability over the art cited in the Action. Hence, claims 13-20 should be allowable over the art.

Claims 1, 5, 8, 26 and 28 were rejected under 35 U.S.C. §103 as obvious over US Patent No. 6,427,346 to Stieff et al. (hereinafter Stieff) in combination with the DSP 400 document (apparently referring to Hunter Engineering Co. Product Literature – Form No. 4346T, "DSP400 Series Sensors," dated March, 2001). Claims 1, 8, 26 and 28 have been cancelled. The recitation of the spacer from former dependent claim 7 has been moved up and incorporated into independent claim 5. Although the claim has been revised somewhat on other points, it is

believed that claim 5 includes the patentable feature of former dependent claim 7. Hence, the art rejection should be moot, and claim 5 and its dependent claims (10-12) should be in condition for allowance.

As amended, claim 21 relates to a method of certifying calibration of a computer-based vehicle wheel alignment system. The claimed method involves assembling two axles and two side spacers into a quadrilateral shape of a certification jig on the site of the computer-based vehicle wheel alignment system. At least one diagonal of the certification jig is set, to insure that the jig is assembled so as to form the quadrilateral shape; and the wheel alignment system is operated to measure a parameter of the certification jig. The method also entails comparing the measured parameter to a known value of a corresponding parameter of the certification jig. If the result of the comparison shows that the measured parameter is within a standard acceptable range of the known value of the corresponding parameter of the certification jig, the computer-based vehicle wheel alignment system is certified as accurately calibrated. As expressly recited in the claim, the method also involves disassembling the quadrilateral shaped certification jig after the certification of the computer-based vehicle wheel alignment system. It is respectfully submitted that the combination of the Stieff and DSP 400 documents would not teach all aspects of the claimed method to one of ordinary skill in the art.

Stieff apparently discloses a relatively rigid, permanently constructed jig. Although it may be assembled at some point during its manufacture, there is no suggestion in Stieff to assemble the jig on the site of the alignment system that is to be certified and then disassemble the jig after certification. The DSP 400 document only discloses a single axle on stands. Since there is not set of axles and spacers, there is no teaching in the DSP 400 document to assemble axles and spacers on the site of the alignment system that is to be certified and then disassemble the jig after certification. Hence, no reasonable combination of the Stieff and DSP 400

documents would lead to a methodology involving the assembly and disassembly steps recited in independent claim 21.

The rejection of former claim 26 (bottom of page 2 of the Detailed Action) alleges that disassembly would have been obvious. However, that claim did not recite on-site assembly, and there was no evidence to support the proposition that disassembly would have been obvious. The burden falls on the Patent Office, and thus on the Examiner, to present clear factual evidence supporting all necessary elements of the prima facie case of obviousness, and this burden of proof is not met where there is no factual showing of a specifically cited relevant prior art teaching of a claim recitation and/or evidence of the requisite motivation to combine or modify the teachings of the base reference. *See e.g. In re Lee*, 277 F. 3d 1338, 61 USPQ2d 1430 (Fed. Cir. 2002) (obviousness determination vacated for lack of evidentiary support for conclusory statements regarding obviousness to select and combine); and *In re Zurko*, 258 F. 3d 1379, 59 USPQ2d 1693 (Fed. Cir. 2001) (deficiencies of the cited references cannot be remedied by general allegations of “basic knowledge” or common sense). That burden is not met by a mere allegation that it would have been obvious to disassemble the jig allegedly produced by combining the Stieff and DSP 400 documents. Absent further evidence on the point, it is submitted that there is no prima facie case of obviousness and that the on-site assembly recitation and the disassembly recitation of claim 21 patentably distinguish that claim over the art.

For the reasons outlined above, it is believed that amended claim 21 is patentable over the art, particularly the applied Stieff and DSP 400 documents. Claims 23, 25 and 29-32 depend from claim 21 and should be allowable therewith.

Applicants are also presenting new claims 33-44, to recite additional subject matter that should be patentable over the applied art. Patentability of the new independent claims (33 and 38) is discussed below.

Claim 33 is somewhat similar to claim 21 except that 33 recites calibration instead of certification. Claim 33 omits references to the jig as a “certification” jig since the jig is used for calibration in this claim. Of note, claim 33 recites a step of assembling two axles and two side spacers into a quadrilateral shape of the jig on the site of the computer-based vehicle wheel alignment system. Claim 33 also recites a step of disassembling the quadrilateral shaped jig, albeit after the calibration of the computer-based vehicle wheel alignment system. It is respectfully submitted that such assembly and disassembly steps would not have been obvious in view of Stieff and the DSP 400 document.

As noted earlier, Stieff apparently discloses a relatively rigid, permanently constructed jig. Although it may be assembled at some point during its manufacture, there is no suggestion in Stieff to assemble the jig on the site of the alignment system, that is to say the site of the system that is to be calibrated. Stieff also fails to teach disassembling the jig after calibration. The DSP 400 document only discloses a single axle on stands. Since there is no set of axles and spacers, there is no teaching in the DSP 400 document to assemble axles and spacers to form the desired shape on the site of the alignment system that is to be calibrated and then disassemble the jig after calibration. Hence, no reasonable combination of the Stieff and DSP 400 documents would lead to a methodology involving the assembly and disassembly steps recited in independent claim 33. The unsupported allegation of obviousness to disassemble a jig (re claim 26 on page 2 of the Action) is not enough to overcome the deficiencies in the teachings of the Stieff and DSP 400 documents. Hence, claim 33 and the claims that depend from it (34-37) should be patentable over the art of record.

Claim 38 relates to an apparatus for use in certification of accuracy of a vehicle wheel aligner system. The apparatus comprises two axles, two side spacers and a diagonal spacer. Four couplers allow attachment of the two side spacers to ends of the two axles, to thereby form

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a quadrilateral shaped frame having a diagonal length corresponding to length of the diagonal spacer. The claim expressly recites that these couplers also allow detachment of the two side spacers from the ends of the axles to disassemble the frame. It is respectfully submitted that inclusion of such couplers, allowing both attachment and detachment to assemble and disassemble the frame, would not have been obvious to a person of skill in the art in view of Stieff and the DSP 400 document.

Apparatus claim 38 also recites that, when assembled, the quadrilateral shaped frame is substantially the size of a vehicle as might be processed by a vehicle wheel aligner system to be certified, and the apparatus is portable when the quadrilateral shaped frame is disassembled. It is not seen where or how applied documents fairly suggest that when assembled, the quadrilateral shaped frame is substantially the size of a vehicle as might be processed by a vehicle wheel aligner system to be certified, and the apparatus is portable when the quadrilateral shaped frame is disassembled.

It is respectfully submitted that an unsupported allegation of obviousness to disassemble would not be enough to make up for the above-noted deficiencies in the teachings of the Stieff and DSP 400 documents. The record to date does not provide any teaching on point and does not provide evidence that a relevant motivation would have been readily apparent to one of skill in the art, to further modify Stieff and DSP 400 in some manner that might arguably lead to the apparatus as now recited in claim 38. Hence, claim 38 and the claims that depend from it (39-44) should be patentable over the art of record.

Upon entry of the above claim amendments, claims 5, 10-21, 23, 24 and 29-44 remain active in this application, all of which should be patentable over the art applied in the Action. Applicants therefore submit that all of the claims are in condition for allowance. Accordingly,

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this case should now be ready to pass to issue; and Applicants respectfully request a prompt favorable reconsideration of this matter.

It is believed that this response addresses all issues raised in the January 11, 2006 Office Action. However, if any further issue should arise that may be addressed in an interview or by an Examiner's amendment, it is requested that the Examiner telephone Applicants' representative at the number shown below.

To the extent necessary, if any, a petition for an extension of time under 37 C.F.R. § 1.136 is hereby made. Please charge any shortage in fees due in connection with the filing of this paper, including extension of time fees, to Deposit Account 500417 and please credit any excess fees to such deposit account.

Respectfully submitted,

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